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tive place having its own particular pole, the revolving motion of which is regulated by some general but hitherto unknown law.

May 16, 1833.

HIS ROYAL HIGHNESS THE DUKE OF SUSSEX, K.G., President, in the Chair.

A paper was read, entitled, "Note on a Paper by Dr. John Davy, entitled, 'Notice on the Remains of the recent Volcano in the Mediterranean.'" By Charles Daubeny, M.D., F.R.S., Professor of Chemistry in the University of Oxford.

From the circumstance that azotic gas is frequently evolved from thermal springs, the author infers that this phenomenon is in some way connected with volcanic action; and this he considers to be the case in the instance observed by Dr. Davy, although referred by him to the decomposition of atmospheric air during putrefactive processes going on at the bottom of the sea. Dr. Daubeny offers objections to the theory of that gas rising to the surface in consequence of the high temperature to which it has been subjected. He conceives that the air which Dr. Davy examined cannot have been derived from sea-water, but must have originated from the atmosphere itself, with which the volcano communicated. The author is disposed to attach great importance to the accurate examination of the gases given out by warm springs, and recommends the prosecution of the inquiry.

A paper was also read, entitled, "Experimental Researches on Atomic Weights." By Edward Turner, M.D., F.R.S. Lond. and Edinb., Professor of Chemistry in the University of London.

This paper is a continuation of the Essay, by the same author, on the Composition of the Chloride of Barium, which was published in the Philosophical Transactions for 1829. Having shown that the atomic weights current among British chemists, though in some instances correct, or tolerably approximative, have, as a whole, been adopted on insufficient evidence, he proceeds, in this paper, to give an account of the experiments he has made to ascertain the equivalent numbers for lead, chlorine, silver, barium, and nitrogen. Finding, with reference to lead, that the method adopted by Berzelius did not afford uniform results, he endeavoured to ascertain the quantity of subsulphate of lead which given weights of metallic lead and the protoxide of that metal respectively produce. He details the mode he employed for the conversion of metallic lead into the subsulphate by a mixture of nitric and sulphuric acids, diluted with an equal bulk of water, and the precautions he adopted to avoid loss. The mean of three experiments gave 146·375 grains of sulphate of lead for 100 grains of metallic lead. By the mean of four experiments, Berzelius had obtained, instead of the former number, 146·419. Dr. Turner adopts the mean of the whole, namely, 146·41. By prosecuting this inquiry,